

**TECHNICAL REVIEW DOCUMENT
For
RENEWAL of OPERATING PERMIT 95OPEP110**

Fort Carson
El Paso County
Source ID 041/0014

Prepared by Matthew S. Burgett
July 2006 – April 2007

I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued September 1, 1998, and expired on September 1, 2003. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted August 30, 2002, and additional technical information submitted, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document (TRD) for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

Fort Carson provides facilities and service to U.S Armed Forces that require land and airspace to practice combat skills and operations on a year-round basis. Units assigned to Fort Carson have changed over time, and are undergoing transformation. Historically, though, between 15,000 and 25,000 active duty soldiers have been, and are projected to be, stationed at the installation at any given time, along with their weapons and equipment. This active military training

facility, for both weapons qualifications and field training, also supports the Colorado Army National Guard, Army Reserve Components, and other military units. As a result, the Installation has several vehicle maintenance facilities for armored tanks and other tracked and wheeled vehicles, as well as a complete tank engine depot maintenance and dynamometer testing facility for specific wheeled-vehicle engines. The Butts Army Air Field (BAAF) has an active runway and hangar facility, used primarily by Army rotary-wing aircraft, and has an associated engine test stand.

The following generalized list of sources of air emissions exist at Fort Carson: boilers, high temperature hot water (HTHW) generators, furnaces/space heaters, emergency generators, paint spray booths, fuel storage and use operations, facility-wide chemical use, and military smoke and obscurants.

The facility is located in the east central portion of Colorado adjacent to the southern boundary of Colorado Springs, Colorado. The installation occupies approximately 138,000 acres in El Paso, Fremont and Pueblo Counties. The area in which the installation operates is designated as attainment for all criteria pollutants.

There are no affected states within 50 miles of the installation. There are no Federal Class I designated areas within 100 kilometers of the facility. Florissant Fossil Beds National Monument is a Federal land area within 100 kilometers of the facility. Florissant Fossil Beds has been designated by the State to have the same sulfur dioxide increment as a Federal Class I area.

One of the special listed source categories of the Prevention of Significant Deterioration (PSD) provisions addresses facilities with combinations of fossil fuel burning boilers that total more than 250 million Btu/hr heat input. The PSD provisions set a threshold of 100 tons per year for major source classification for the special category sources. The existing Fort Carson fossil fuel burning boilers have a collective heat input exceeding 250 mmBtu/hr. The potential to emit for the Fort Carson emissions of nitrogen oxides (NO_x) exceed 250 ton/yr. In addition, the NO_x emissions from the listed source category also exceeds 100 ton/yr. Thus, Ft. Carson is considered a major source for PSD applicability.

Emissions

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to update the potential to emit based on revisions to permitted emission limits, and to update actual emissions.

	FACILITY-WIDE POTENTIAL TO EMIT						
	PM	PM ₁₀	NO _x	CO	SO ₂	VOC	HAPs
Boilers & Hot Water Generators	3.0	1.5	55.5	43.62	7.87		
Categorically Exempt Boilers ¹	10.81	10.81	130.84	119.45	0.85	7.82	
Other Categorically Exempt External Combustion Sources ¹	3.33	3.33	43.8	36.79	0.26	2.41	
Engines/Generators	1.1	1.1	53.25	15.57	7.87	1.24	
Categorically Exempt E/G ¹	1.76	1.76	30.81	6.38	1.6	2.13	
Paint Booths	0.98	0.98	1.8	1.51		17.76	
Categorically Exempt Storage Tanks ¹						19.65	
Abrasive Blasting	0.07	0.07					
Smoke & Obscurant (stationary)	31.82	31.82				31.82	
Smoke & Obscurant (<i>fugitive</i>)	32.11	32.11					
Parts washers/cleaners						13.2	
Other chemical use ¹	10.1	10.8				17.71	
Fire Training Facility ¹	0.02	0.02	0.11	0.03		0.05	
Southern Terminal Services Permits						7.63	
TOTALS	95.1	94.3	316.1	223.4	18.45	121.4	20.0

¹ The PTE for the categorically exempt equipment was determined based on a table submitted by Ft. Carson (CY 2005 FTC PTE) November 21, 2006.

	TONS PER YEAR						
	FACILITY-WIDE ESTIMATED ACTUAL EMISSIONS Calendar Year 2005²						
	PM	PM ₁₀	NO _x	CO	SO ₂	VOC	HAPs
TOTALS	164.7	34.8	71.5	51.8	4.3	47.2	11.7

² The actual emissions were determined based on the table submitted by Ft. Carson (CY 2005 ACTUALS) November 21, 2006. Particulate emissions include fugitive dust emissions from roads/trails.

Compliance Assurance Monitoring (CAM) Applicability

Fort Carson is not required to obtain a CAM plan since no emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold.

III. Discussion of Modifications Made

Source Requested Modifications

A large number of modifications were made to the permit as requested by Fort Carson. Modification requests will be summarized under the appropriate emission source (or permit location) listed below:

Page following cover page

- The responsible official and facility contact person were updated.
- The contact address was updated.
- The report deadlines have been changed as requested.

Section I – General Activities & Summary

Fort Carson had requested that the Division add a reference to the General Conformity requirements of 40 CFR Part 93 in the permit. The Division did not feel this requirement was necessary in the permit and it was not added.

Section II – Specific Permit Terms

The following units have been removed from the Title V permit as requested since the unit(s) have been either physically removed, or permitting is not required for various reasons:

- AIRS ID 049 – 9620 boiler > removed from operation.
- AIRS ID 008 – 1860 boiler > removed from operation.
- AIRS ID 050 – 403 boiler > removed from operation.
- AIRS ID 028, 029, 066 – Landfill & associated activities > removed from operation, or below APEN levels.
- AIRS ID 071 – WWTP flare > removed from operation.
- AIRS ID 060 & 061 – open burning/detonation > emissions below APEN levels.
- AIRS ID 065 – SVE > emissions below APEN levels.
- AIRS ID 063 – Hospital ETOs > removed from operation.
- AIRS ID 064 – WWTP > emissions below APEN levels.
- AIRS ID 055, 054 & 077 – AAFES gas stations > sources have been disaggregated. They are no longer considered a single source with Fort Carson per EPA guidance.
- AIRS ID 043 & 038 – paint booths > VOC emission below APEN levels.

AIRS ID 002 – Bldg. 6290 boilers

The modified construction permit (11EP682 – Issued October 31, 2005) has been incorporated into the Title V as requested. Language in this condition has been updated to the current standard language. Changes include:

- Emission limits updated.
- Emission factors updated to current emission factors from AP-42.
- Natural gas limit reduced.
- Units' heat input rating has been corrected to 42 MMBtu/hr.
- Fuel oil use and fuel oil specific requirements eliminated.
- Title V language updated for opacity. Compliance with the opacity limit is presumed since only natural gas is permitted to be used.
- Previous Condition 6.5 (requiring APEN submittal) has been removed since this is not standard language and unnecessary.
- The Regulation No.1 particulate matter emission limit has been added to the permit as Condition 1.5.
- Blended fuel will not be used in this equipment (as stated in the analysis below). The original estimate on the amount of blended fuel stored in the fuel tanks was overestimated. Thus, blended fuel is not listed as a possible fuel, and the emission factors do not account for blended fuel.

For additional information the following notes have been reproduced from the most recent construction permit analysis:

These boilers are being combined onto one permit and adjusting their fuel use limits. Permits C-11, 682-1 and C-11, 682-2 are canceled upon issuance of this permit.

NSPS:

The NSPS D-series does not apply because these boilers began operation in 1979 and are less than 250 mmbtu/hr.

PSD:

The Division determined that this modification to use blended fuel in some of the boilers located at Ft. Carson (see permits 12EP291-1 & 03EP1084) could have possible PSD implications since the increase in emissions may exceed the significance levels. A letter was sent to Ft. Carson on November 17, 2004 to address this issue. Ft. Carson responded with a letter dated May 13, 2005. In this letter they requested to modify their previous request to reduce requested emissions and stay under the significance levels. Ft. Carson included an Actual to Potential test to show that significance levels were not exceeded. Ft. Carson included 5 boilers & 5 hot water generators in this analysis, three of which will be using the blended fuel oil as a back-up fuel. The other boilers not affected by the blended fuel oil (including the boilers covered under this permit 11EP682) were changing their fuel use limits. I discussed the submitted analysis with Jim King and Jackie Joyce of APCD and we feel it is acceptable to show that PSD significance levels were not exceeded.

AIRS ID 005 – Bldg. 7504 HTHW generators

The modified construction permit (82EP044 – Issued October 31, 2005) has been incorporated into the Title V as requested. Language in this condition has been updated to the current standard language. Changes include:

- Natural gas and fuel oil conditions combined into Section II.2.
- Emission limits updated.
- Emission factors updated to current emission factors from AP-42.
- Natural gas limit reduced.
- Fuel oil limit increased. Language modified to clarify that use of No. 2 fuel oil, biodiesel, and other distillate oil is allowed.
- Title V language updated for opacity. Compliance with the opacity limit is presumed when natural gas is used. One Method 9 opacity observation is required on an annual basis if fuel oil is used during the year. A 2nd Method 9 opacity reading is required if more than 46,000 gallons (combined) of fuel oil is used in any annual period. This equates to about 250 hours of operation.
- Previous Conditions 5.7 & 4.5 (requiring APEN submittal) have been removed since this is not standard language and unnecessary.
- The Regulation No.1 particulate matter emission limit has been added to the permit as Condition 2.5.
- A 0.5% fuel oil sulfur content limit has been added to the permit. Compliance can be demonstrated via sampling and testing, or with vendor data.
- Units are referred to as hot water generators as requested.
- Units' heat input has been corrected to 26 MMBtu/hr.
- Low NOx burners (rated at 30 ppm for natural gas and 80 ppm for fuel oil) and flue gas recirculation (FGR) has been incorporated.
- Blended fuel will not be used in this equipment (as stated in the analysis below). The original estimate on the amount of blended fuel stored in the fuel tanks was overestimated. Thus, blended fuel is not listed as a possible fuel, and the emission factors do not account for blended fuel.

For additional information the following notes have been reproduced from the most recent construction permit analysis:

These hot water generators are being combined onto one permit and modifying their fuel use limits. Permits 82EP044-1 and 82EP044-2 are canceled upon issuance of this permit.

NSPS:

The NSPS D-series does not apply because these units began operation in 1986 and are less than 250 mmbtu/hr.

PSD:

The Division determined that this modification to use blended fuel in some of the boilers located at Ft. Carson (see permits 12EP291-1 & 03EP1084) could have possible PSD implications since the increase in emissions may exceed the significance levels. A letter was sent to Ft. Carson on November 17, 2004 to address this issue. Ft. Carson responded with a letter dated May 13, 2005. In this letter they requested to modify their previous request to reduce requested emissions and stay under the significance levels. Ft. Carson included an Actual to Potential test

to show that significance levels were not exceeded. Ft. Carson included 5 boilers & 5 hot water generators in this analysis, three of which will be using the blended fuel oil as a back-up fuel. The other units not affected by the blended fuel oil (including the units covered under this permit 82EP044) were changing their fuel use limits. I discussed the submitted analysis with Jim King and Jackie Joyce of APCD and we feel it is acceptable to show that PSD significance levels were not exceeded.

AIRS ID 022 – Bldg. 8300 boilers

Changes have been made according to the August 2002 & May 2003 requests. Language in this condition has been updated to the current standard language. Changes include:

- Emission limits updated.
- The heat input rating of the boilers has been corrected to 12.553 MMBtu/hr.
- Emission factors updated to current emission factors from AP-42.
- Natural gas limit reduced.
- The SO₂, VOC & PM₁₀ sections have been removed from the table. The emissions from these pollutants are below 2.0 ton/yr and should not be listed in the table.
- Title V language updated for opacity. Compliance with the opacity limit is presumed since only natural gas is permitted to be used.
- Previous Condition 8.5 (requiring APEN submittal) has been removed since this is not standard language and unnecessary.
- The Regulation No.1 particulate matter emission limit has been added to the permit as Condition 3.5.

AIRS ID 051 – Bldg. 1860 boilers

The modified construction permit (12EP291-1 – Issued October 31, 2005) has been incorporated into the Title V as requested. Language in this condition has been updated to the current standard language. Changes include:

- Emission limits updated.
- Emission factors updated to current emission factors from AP-42.
- Unit #1's heat input was corrected to 47 MMBtu/hr.
- Natural gas limit reduced.
- Fuel oil limit increased. Language modified to clarify that use of No. 2 fuel oil, biodiesel, and other distillate oil is allowed.
- Title V language updated for opacity. Compliance with the opacity limit is presumed when natural gas is used. One Method 9 opacity observation is required on an annual basis if fuel oil is used during the year. A 2nd Method 9 opacity reading is required if more than 84,000 gallons of fuel oil (combined) is used in any annual period. This equates to about 250 hours of operation.
- Previous Condition 3.7 (requiring APEN submittal) has been removed since this is not standard language and unnecessary.
- The Regulation No.1 particulate matter emission limit has been added to the permit as Condition 4.5.

- A 0.25% fuel oil sulfur content limit has been added to the permit. Compliance can be demonstrated via sampling and testing, or with vendor data.
- Units are referred to as HTHW generators as requested.
- Blended fuel will not be used in this equipment (as stated in the analysis below). The original estimate on the amount of blended fuel stored in the fuel tanks was overestimated. Thus, blended fuel is not listed as a possible fuel, and the emission factors do not account for blended fuel.

For additional information the following notes have been reproduced from the most recent construction permit analysis:

These hot water generators are being combined onto one permit. Permits 12EP291-2 & -3 are canceled upon issuance of this permit. NSPS D-series does not apply because these boilers began operation in 1978 and are less than 250 mmbtu/hr.

Ft. Carson informed the APCD that the No. 2 fuel oil used in these boilers has been blended with No. 6 fuel oil at some point. Approximately 8,500 gallons of #6 oil was inadvertently added to the #2 fuel oil in early 2003 (per 9/1/04 letter from Ft. Carson). Testing was conducted on the blended fuel tanks for sulfur content of the fuel. None of the fuel exceeded 0.25% sulfur. I estimated fuel oil emissions using the #4 fuel oil emission factors and with a sulfur content of 0.25%. Ft. Carson will be refilling the tanks with No. 2 fuel oil and the Division has decided to consider the fuel in each tank to be No. 2 fuel oil after 2 tank turnovers, or upon submittal of acceptable test sampling that shows the fuel to be #2. The Division must approve any testing plan and review the results before the fuel can be considered #2. Thus, the permit will allow Ft. Carson to use blended fuel, No. 2 fuel, biodiesel, or other distillate fuels.

PSD:

The Division determined that this modification to use the blended fuel could have possible PSD implications since the increase in emissions may exceed the significance levels. A letter was sent to Ft. Carson on November 17, 2004 to address this issue. Ft. Carson responded with a letter dated May 13, 2005. In this letter they requested to modify their previous request to reduce requested emissions and stay under the significance levels. Ft. Carson included an Actual to Potential test to show that significance levels were not exceeded. Ft. Carson included 5 boilers and 5 hot water generators in this analysis, three of which will be using the blended fuel oil as a back-up fuel. The other boilers were changing their #2 fuel oil use limits. I discussed the submitted analysis with Jim King and Jackie Joyce of APCD and we feel it is acceptable to show that PSD significance levels were not exceeded.

AIRS ID 075 – Bldg. 8000 boilers

The new construction permit (02EP0952 – Final Approval Issued September 30, 2004) has been incorporated into the Title V as requested. Requirements include:

- NO_x and CO emission limits (reduced from limit in construction permit).
- Current AP-42 emission factors listed in table.
- Natural gas use limit (reduced from limit in construction permit).
- Compliance with the opacity limit is presumed since only natural gas is permitted to be used.
- The Regulation No.1 particulate matter emission limit has been added to the permit as Condition 5.5.

AIRS ID 076 – Bldg. 9609 boilers

The new construction permit (02EP0953 – Initial Approval Modification No. 1 Issued August 8, 2004) has been incorporated into the Title V as requested.

Requirements include:

- NO_x and CO emission limits.
- Current AP-42 emission factors listed in table.
- Natural gas use limit.
- Fuel oil, biodiesel, and distillate oil use limit.
- Title V language updated for opacity. Compliance with the opacity limit is presumed when natural gas is used. One Method 9 opacity observation is required on an annual basis if fuel oil is used during the year. A 2nd Method 9 opacity reading is required if more than 13,000 gallons of fuel oil (combined) is used in any annual period. This equates to about 250 hours of operation.
- The Regulation No.1 particulate matter emission limit has been added to the permit as Condition 6.5.
- A 0.5% fuel oil sulfur content limit has been added to the permit. Compliance can be demonstrated via sampling and testing, or with vendor data.
- The Regulation No. 1 SO₂ emission limit has been added to the permit as Condition 6.7.
- A revised APEN was submitted to change the natural gas fuel use limit to 90 MMscf/yr. The permit limits were revised accordingly.

AIRS ID 085 – Bldg. 1860 HTHW generator

The new construction permit (03EP1084– Initial Approval Modification Issued October 31, 2005) has been incorporated into the Title V as requested.

Requirements include:

- PM, SO₂, NO_x and CO emission limits.
- Current AP-42 emission factors listed in table.
- Natural gas use limit (increased from construction permit limit).
- Fuel oil, biodiesel, and distillate oil use limit.
- Title V language updated for opacity. Compliance with the opacity limit is presumed when natural gas is used. One Method 9 opacity observation is required on an annual basis if fuel oil is used during the year. A 2nd Method 9 opacity reading is required if more than 55,000 gallons of fuel oil is used in any annual period. This equates to about 250 hours of operation.
- The Regulation No.1 particulate matter emission limit has been added to the permit as Condition 7.5.
- A 0.25% fuel oil sulfur content limit has been added to the permit. Compliance can be demonstrated via sampling and testing, or with vendor data.
- The Regulation No. 1 SO₂ emission limit has been added to the permit as Condition 7.7.

- Compliance with NSPS Dc is required and included as Condition 7.8.
- Units are referred to as HTHW generators as requested.
- Blended fuel will not be used in this equipment (as stated in the analysis below). The original estimate on the amount of blended fuel stored in the fuel tanks was overestimated. Thus, blended fuel is not listed as a possible fuel, and the emission factors do not account for blended fuel.

For additional information the following notes have been reproduced from the most recent construction permit analysis:

Ft. Carson informed the APCD that the No. 2 fuel oil used in this boiler has been blended with No. 6 fuel oil at some point. Approximately 8,500 gallons of #6 oil was inadvertently added to the #2 fuel oil in early 2003 (per 9/1/04 letter from Ft. Carson). Testing was conducted on the blended fuel tanks for sulfur content of the fuel. None of the fuel exceeded 0.25% sulfur. I estimated fuel oil emissions using the #4 fuel oil emission factors and with a sulfur content of 0.25%. Ft. Carson will be refilling the tanks with No. 2 fuel oil and the Division has decided to consider the fuel in each tank to be No. 2 fuel oil after 2 tank turnovers, or upon submittal of acceptable test sampling that shows the fuel to be #2. The Division must approve any testing plan and review the results before the fuel can be considered #2. Thus, the permit will allow Ft. Carson to combust either blended fuel, No. 2 fuel, biodiesel, or other distillate fuels.

PSD:

The Division determined that this modification to use blended fuel could have possible PSD implications since the increase in emissions may exceed the significance levels. A letter was sent to Ft. Carson on November 17, 2004 to address this issue. Ft. Carson responded with a letter dated May 13, 2005. In this letter they requested to modify their previous request to reduce requested emissions and stay under the significance levels. Ft. Carson included an Actual to Potential test to show that significance levels were not exceeded. Ft. Carson included 5 boilers & 5 hot water generators in this analysis, three of which will be using the blended fuel oil as a back-up fuel. The other boilers were changing their #2 fuel oil use limits. I discussed the submitted analysis with Jim King and Jackie Joyce of APCD and we feel it is acceptable to show that PSD significance levels were not exceeded.

AIRS ID 053 – Bldg. 7501 Emergency Generators

Modifications have been incorporated into the Title V as requested. Changes include:

- Engine rating corrected to 1310 hp.
- Compliance emission factors updated and changed format to lb/hp-hr.
- Emission limits updated. PM, PM₁₀ and VOC limits removed since they are below 2.0 ton/yr.
- A 0.5% fuel oil sulfur content limit has been added to the permit. Compliance can be demonstrated via sampling and testing, or with vendor data.
- Title V language updated for opacity. One Method 9 opacity observation is required on an annual basis if fuel oil is used during the year. A 2nd Method 9 opacity reading is required if operated more than 250 hours of operation.
- The Regulation No. 1 SO₂ emission limit has been added to the permit as Condition 8.6.
- Previous Condition 11.7 (requiring APEN submittal) has been removed since this is not standard language and unnecessary.

AIRS ID 057 – Bldg. 8000 Dynamometers

Modifications have been incorporated into the Title V as requested. These changes incorporate the modified construction permit (96EP340-9 > issued September 22, 2004) and the Minor Modification (submitted July 13, 2006). Changes include:

- Emission limits updated.
- Operating hours reduced.
- Dynamometer information (make/model) updated.
- The requirement to determine the number of tests exceeding 30 minutes has been removed from the permit. The Division has determined that no opacity monitoring shall be required at this time.
- Title V language updated for opacity to match current regulatory language.
- The Regulation No. 1 SO₂ emission limit has been added to the permit as Condition 9.5.
- Previous Condition 12.6 (requiring APEN submittal) has been removed since this is not standard language and unnecessary.

AIRS ID 074 – Butts Army Airfield (BAAF) Flexible Engine Diagnostics System (FEDS)

The new construction permit (02EP0104– Initial Approval Issued March 27, 2002) has been incorporated into the Title V as requested. Requirements include:

- NO_x and CO emission limits.
- Opacity limits.
- The Regulation No. 1 SO₂ emission limit has been added to the permit as Condition 10.5.
- Changed the name from “engine test cell”.
- The Division has asked Ft. Carson to develop compliance emission factors for this test cell. The Division has included the emission factors and an appropriate operational limit. The emission factors were based on the worst-case emission factors from a variety of engines used in the FEDS.

AIRS ID 081 – Bldg. 3909 Engine Generator

The new construction permit (03EP0337– Initial Approval Issued September 29, 2004) has been incorporated into the Title V as requested. Requirements include:

- SO₂, NO_x and CO emission limits.
- Operating hours limit.
- Title V language updated for opacity. One Method 9 opacity observation is required on an annual basis if fuel oil is used during the year. A 2nd Method 9 opacity reading is required if operated more than 250 hours of operation.

- A 0.5% fuel oil sulfur content limit has been added to the permit. Compliance can be demonstrated via sampling and testing, or with vendor data.
- The Regulation No. 1 SO₂ emission limit has been added to the permit as Condition 11.6.

AIRS ID 082 – Bldg. 1550 Engine Generator

The new construction permit (03EP0338– Initial Approval Issued September 29, 2004) has been incorporated into the Title V as requested. Requirements include:

- SO₂, NO_x and CO emission limits.
- Operating hours limit.
- Title V language updated for opacity. One Method 9 opacity observation is required on an annual basis if fuel oil is used during the year. A 2nd Method 9 opacity reading is required if operated more than 250 hours of operation.
- A 0.5% fuel oil sulfur content limit has been added to the permit. Compliance can be demonstrated via sampling and testing, or with vendor data.
- The Regulation No. 1 SO₂ emission limit has been added to the permit as Condition 12.6.

AIRS ID 046 – Bldg. 8000 Paint Booths

Ft. Carson has requested a change in paint/material use to 12,000 gallons/yr. However, the Division does not typically place specific gallon/yr limits in the permit since coatings all have different components. A requirement to calculate emissions using a mass balance approach will yield more accurate emission estimates. Revised requirements include:

- The requirements of construction permit 96EP340-16 have been included. A construction permit modification was issued on January 11, 2007.
- Mass balance calculation requirement.
- Change in PM, PM₁₀, and VOC emissions based on requested material use.
- Combustion emission limits included from air heater natural gas combustion.
- Previous Condition 16.4 (requiring APEN submittal) has been removed since this is not standard language and unnecessary.
- The opacity conditions have been revised to reflect regulatory language.
- Reg. 7 RACT requirement added.

AIRS ID 078 – BAAF Paint Booth

The new construction permit (02EP0955– Initial Approval issued September 10, 2003) has been incorporated into the Title V as requested. Requirements include:

- VOC emission limit.

- Paint/material use limit. Ft. Carson has requested both a 200 gal/yr limit and 50 gal/yr limit on individual paint formulations to ensure exemption from the Aerospace MACT.
- Title V language updated for opacity. Compliance with the opacity limit is presumed for this VOC only source.
- Requirement to use exhaust filters to minimize PM emissions.
- Reg. 7 RACT requirement.

AIRS ID 067 – Abrasive Blast System

Ft. Carson has requested to be allowed to use glass media and compliance demonstrated on an annual basis. The Division will allow the use of glass media since it is commonly used in many abrasive blast systems. Compliance must be demonstrated on a rolling 12-month basis. Additional changes include:

- Previous Condition 26.3 (requiring APEN submittal) has been removed since this is not standard language and unnecessary.
- Language changes to require operation of control equipment while in use and shutdown & repair if opacity observed (language was suggested by Fort Carson).

AIRS ID 062 – Mechanical Smoke Generators

Ft. Carson has requested incorporation of the new applicable Reg. 1 requirements, addition of synthetic graphite, and combining limits. Fort Carson also requested to split the Smoke & Obscurant conditions into two separate conditions. Point 062 now covers the mechanical smoke generators. Point 094 covers the fugitive smoke use. Revisions include:

- Synthetic Graphite use was added to the fog oil limit.
- The short-term emission limits have been removed. The Division no longer requires short-term emission limits.
- The revised Reg. 1, II.D. requirements have been added to the permit as Condition 16.3.
- Previous Condition 20.4 (requiring APEN submittal) has been removed since this is not standard language and unnecessary.

AIRS ID 094 – Smoke & Obscurant Use

Fort Carson also requested to split the Smoke & Obscurant conditions into two separate conditions. Point 062 now covers the mechanical smoke generators. Point 094 covers the fugitive smoke use. Revisions include:

- The usage limits and emission factors have been revised. Usage is now tracked on a per item basis.
- The revised Reg. 1, II.D. requirements have been added to the permit as Condition 17.3.
- An increase in fugitive PM & PM10 emissions has been requested. There are no PSD implications with this request since all these emissions are considered fugitive.

AIRS ID 777/1214/001 – Portable Rock Crushing Equipment

- (98PO0237– Final Approval Issued July 16, 2003).
- Fort Carson has requested removal of this equipment since it is no longer on site. This equipment has been removed from the Title V permit.

AIRS ID 091 – Aggregate Material Handling, Stockpiling, Transport

- (04EP0820– Initial Approval Issued September 2, 2004)
- Fort Carson has requested removal of this activity since it is now considered insignificant. This activity has been removed from the Title V permit.

AIRS ID 048 – Browns Quarry

- (construction permit 95EP420)
- Fort Carson has requested removal of this activity since it is no longer used. This activity has been removed from the Title V permit.

AIRS ID 083 – Facility-wide HAP Limits

The new construction permit (03EP0379– Initial Approval Issued September 29, 2004) has been incorporated into the Title V as requested. Requirements include:

- 20 ton/yr total HAP limit & 8 ton/yr individual HAP limit.
- Ft. Carson is required to track HAP emissions from all insignificant activities on an annual basis. This is due to the fact that Ft. Carson has a large number of insignificant activities and must prove that total facility-wide emissions do not exceed the requested limits.

AIRS ID 059 – Parts Washers and Weapon Cleaners

- The “name” of this point has been changed from “base-wide solvent use” to “parts washers and weapon cleaners” to more accurately describe the emission source.

Special Condition Parameter Profiles

Previous Conditions 31.4, 31.5 & 31.6 have been removed as requested since the sources have been removed from service.

Previous Condition 32.0 has been removed as requested since Colorado regulations do not require inspection of insignificant activities for opacity, or require sources to update the list of insignificant activities.

Section III – Permit Shield

The specific non-applicable requirements listed in the permit shield have been updated according to the requests from Ft. Carson.

Appendix A

The directions and list of insignificant activities has been updated by Ft. Carson.

General Notes

- Fort Carson wanted the Division to clarify that preventative maintenance does not count as operation for the “trigger” to conduct an opacity observation. The Division agrees with this statement.
- Fort Carson wanted the Division to clarify when an opacity reading is required to determine compliance with the 30% opacity requirement as it relates to startup. The Division has required opacity observations for many of the fuel oil fired equipment to show compliance with the 30% opacity limit. The Division intends that this requirement should apply while the equipment is fueled with fuel oil and is conducting a cold startup.
- Change the statement: *“Each month, a new twelve-month total shall be calculated using the previous twelve months’ data”* with “By the end of each month, a new twelve-month total shall be calculated using the previous twelve months’ data.”

Other Modifications

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal. These changes are as follows:

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- Added language specifying that the semi-annual reports and compliance certifications are due in the Division’s office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

Section I – General Activities and Summary

- The permitted activities description and attainment status of El Paso County was updated.
- The appropriate Construction Permits were added to Condition 1.3.
- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit.
- In Condition 1.4, General Condition 3.d., and 3.g (new general condition for general provisions) were added as State-only requirements.

- Removed Condition 1.5 referring to the Acid Rain Program. No sources at Fort Carson are subject to the Acid Rain Program.
- Removed Condition 1.7 from previous permit. This condition is not standard language and unclear.
- Condition 3.1 was drafted to reflect the current status of Ft. Carson with respect to PSD.
- Condition 3.2 was included to identify Southern Terminal Services as another stationary source which is considered a single-source with Fort Carson for PSD purposes.
- Based on comments made by EPA on another operating permit, the phrase “Based on the information provided by the applicant” was added to the beginning of Condition 4.1 (112(r)).
- Added a “new” Section 5 for compliance assurance monitoring (CAM).
- The table in Section 6 has been updated to reflect current equipment and control devices.

Section II – Specific Permit Terms

- Previous Condition 30 has been removed from the permit. This condition discussed APEN exempt sources and required visible emissions checks on these sources annually. This requirement had no regulatory basis.
- Previous Conditions 31.1, 31.3, 33.0, and 34.0 have been removed from the permit. They discussed definitions, manufacturer’s recommendations, emission calculations, and reporting. It is not necessary/appropriate to include this information as permit conditions.

Section III – Permit Shield

- The citation in the permit shield was corrected. The reference to Part A, Section I.B.43 was changed to Part A, Section I.B.44 and the reference to Part C, Section XIII was changed to Part C, Section XIII.B.

Section IV – General Permit Conditions

- The Affirmative Defense Provision for Excess Emissions during Malfunctions language was added to condition 3.d.
- Condition 5 & 21: Replace “upset” with “malfunction”

Appendix B & C

- This language has been updated to reflect current standard language.

Appendix D

- The address of EPA has been updated.

Section IV – General Conditions

- Added language from the Common Provisions (new condition 3). With this change the reference to “21.d” in Condition 21 (prompt deviation reporting) will be changed to “22.d”, since the general conditions are renumbered with the addition of the Common Provisions.
- The definition of “prompt” has changed and Condition 21 has been updated with the new definition.
- Minor language changes to Condition 22.d have been incorporated.
- The citation in General Condition 17 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from “Reg 1” to “Reg 9”.

Appendices

- The table in Appendix F has been cleared of past modifications.
- Appendix B & C have been updated to the current language.